PAGE: I

RAW SEQUENCE LISTING PATENT APPLICATION US/08/819,669A

DATE: 08/08/98 TIME: 14:17:53

INPUT SET: S27952.raw

This Raw Listing contains the General Information Section and those Sequences containing ERRORS.

| 1 2 | SEQUENCE L | ISTING | Does Not Comply Corrected Diskette Needed |
|----------|---|-------------------------------|---|
| 3 4 | (1) General Information: | | Collected Pro- |
| 5 6 | (i) APPLICANTS: Boon, Thierry; van Pel, Aline; De Plaen, Etienne; Lurquin, Chr | | Pierre; Van den Eynde, Ben ez, Patrick; Traversari, Ca |
| 7 8 | / mnl (ii) TIT | LE OF THVENTT | ON: TUMOR REJECTION ANTIGEN |
| 9 | ANTIGENS AND | | |
| 10 | | | all Left must be visible in page |
| 11 | (iii) NUMBER OF SEQUENCES: 16 | | visitle in |
| 12 | | | rege |
| 13 | (iv) CORRESPONDENCE ADDRESS: | | <i>,</i> , , |
| 14 | | ESSEE: Felfe a ET: 805 Th: | & Lynch |
| 15 16 | (C) CITY | Mew Vo | rk City |
| 17 | (C) CITI | E: New Yo | TRE CITY OF (NUNTRY >U)A |
| 18 | | ZIP: | 10022 |
| 19 | \- / | | & Lynch ird Avenue rk City rk (E) (OUNTRY : USA |
| 20 | (V) COMPUTER READABLE FORM: | | |
| 21 | (A) MEDIUM TYPE: Diskette, 5.25 | inch, 360 kb | storage |
| 22 | (B) COMPUTER: IBM | | |
| 23 | (C) OPERATING SYSTEM: PC-DOS | | |
| 24 25 | (D) SOFTWARE: Wordperfect | | |
| 26 | (vi) CURRENT APPLICATION DATA: | | |
| 27 | (A) APPLICATION NUMBER: 08/819,66 | 9 | |
| 28 | (B) FILING DATE: March 17, 1997 | | |
| 29 | (C) CLASSIFICATION: | | |
| 30 | | | · |
| 31 | (vii) PRIOR APPLICATION DATA: | | |
| 32 | (A) APPLICATION NUMBER: 08/142,3 | 68 | |
| 33 | (B) FILING DATE: May 2, 1994 | | |
| 34 | (ii) DDTOD ADDITONATON DAMA. | | |
| 35 36 | <pre>(vii) PRIOR APPLICATION DATA:</pre> | 4.2 | |
| 37 | (B) FILING DATE: December 12, 19 | | |
| 38 | (b) IIIIII DAII. December 12, 13 | , <u>.</u> | |
| 39 | (vii) PRIOR APPLICATION DATA: | | |
| 40 | (A) APPLICATION NUMBER: 07/764, | 364 | |
| 41 | (B) FILING DATE: September 23, 1 | | |
| 42 | | | |
| 43 | (vii) PRIOR APPLICATION DATA: | | |
| 44 | (A) APPLICATION NUMBER: 07/728,8 | | |
| 45 | / B \ | | |

RAW SEQUENCE LISTING PATENT APPLICATION US/08/819,669A

DATE: 08/08/98 TIME: 14:17:54

INPUT SET: S27952.raw

| 46 | |
|----|---|
| 47 | (vii) PRIOR APPLICATION DATA: |
| 48 | (A) APPLICATION NUMBER: 07/705,702 |
| 49 | (B) FILING DATE: May 23, 1991 |
| 50 | |
| 51 | (viii) ATTORNEY/AGENT INFORMATION: |
| 52 | (A) NAME: Hanson, Norman D. |
| 53 | (B) REGISTRATION NUMBER: 30,946 |
| 54 | (C) REFERENCE/DOCKET NUMBER: LUD 5253.5 DIV JEL/NDH |
| 55 | |
| 56 | (ix) TELECOMMUNICATION INFORMATION: |
| 57 | (A) TELEPHONE: (212) 688-9200 |
| 58 | (B) TELEFAX: (212) 838-3884 |
| | |

ERRORED SEQUENCES FOLLOW:

| | 59 60 | (2) INFORMATION FOR SEQ ID NO: 1: |
|---|----------|--|
| | 61 | (i) SEQUENCE CHARACTERISTICS: |
| > | 62 | (1) SEQUENCE CHARACTERISTICS: |
| / | 63 | (R) TYPE: pugloic acid |
| | 64 | (C) STRANDERNESS: (STRAILER SINGLE |
| | 65 | (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 462 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: Singular (D) TOPOLOGY: linear |
| | 66 | (b) Torologi: linear |
| | 67 | (ii) MOLECULE TYPE: genomic DNA |
| | 68 | (11) housest 1111. general sum |
| | 69 | (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1: |
| | 70 | (va, algorited blackers) and average and a |
| | 71 | ACCACAGG |
| | 72 | |
| | 73 | CTCGTGGG |
| | 74 | CTTGTGAA |
| | 75 | a 127/ 1 Levery Rule, My / 2 Carde , CCCCCTCC |
| | 76 | All 1.86)1010 AGAACTCT AGAACTCT |
| | 77 | GTCAACGC GTCAACGC |
| | 78 | TATCTTAACT TA |
| | 79 | Teel live, Each wie must soil a cumusto |
| | 80 | Per 1.823/a) 1 seguene Robe, orby 72 landere per CTCGTGGG CTCGTGGA CCCCCTCC AGAACTCT bie allowed. Insert a Land return at the end of GTCAACGC TATCTTAACT TA lock brie. Each brie must love a cumulature reduce aird total at right margin (2) INFORMATION FOR SEQ ID NO: 2: |
| | 81 | (2) INFORMATION FOR SEQ ID NO: 2: |
| | 82 | |
| | 83 | (i) SEQUENCE CHARACTERISTICS: |
| > | 84 | (A) LENGTH: 675 base pairs |
| | 85 | (B) TYPE: nucleic acid |
| | 86 | (C) STRANDEDNESS: Singular |
| | 87 | (D) TOPOLOGY: linear |
| | 88 | |
| | 89 | (ii) MOLECULE TYPE: genomic DNA |
| | 90 | |
| | 91 | (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2: |

RAW SEQUENCE LISTING PATENT APPLICATION US/08/819,669A

DATE: 08/08/98 TIME: 14:17:55

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| | | | | | | | | | | | | | | | 11 | VPUT | SET: 3 | 527952 | 2.raw | | | |
|---|-----|--------------|-------|------------|------|--------------|-------|------|------|---------|-------|-------------|--------------|--------------|------------|------|--------|-----------|-------|-----|----------------|----|
| | 92 | | | | | | | | | | | | | | | | | | | | | |
| | 93 | | | | | | | | | | | | | | | | | ATG | TCT | GAT | AAC | AA |
| | 94 | Met | Ser | Asp | Asn | Lys | Lys | Pro | Asp | Lys | Ala | His | Ser | Gly | Ser | Gly | Gly | | | | | |
| | 95 | | | | | 5 | | | | | 10 | | | | | 15 | | | | | | |
| | 96 | | | | | | | | | | | | | | | | | | | | | |
| | 97 | | | | | | | | | | | | | | | | | GAC | GGT | GAT | GGG | AA |
| | 98 | Asp | Glv | Asp | Glv | Asn | Ara | Cys | Asn | Leu | Leu | His | Ara | Tur | Ser | Leu | Glu | | | | | |
| | 99 | | U_J | | 20 | | 9 | 0,0 | | 25 | | | 9 | -1- | 30 | | | | | | | |
| | 100 | | | | 20 | | | | | 23 | | | | | 30 | | | | | | | |
| | | CIN 8 | 3 mm | ama | oom. | mam | OID N | 000 | maa | ата | ama | mma | aam | omm. | ama | 202 | ACA | 144 | | | | |
| > | 101 | | | | | | | | | | | | | | | | | 144 | | | | |
| | 102 | GIU | тте | | Pro | туг | Leu | Gly | _ | Leu | vaı | Pne | АТа | | vaı | THE | Thr | | | | | |
| | 103 | | | 35 | | | | | 40 | | | | | 45 | | | | | | | | |
| | 104 | | | | | | | | | | | | | | | | | | | | | |
| | 105 | | | | | | | | | | | | | | | | | AGT | TTT | CTG | GCG | CT |
| | 106 | Ser | | Leu | Ala | Leu | Gln | Met | Phe | Ile | Asp | Ala | Leu | Tyr | Glu | Glu | Gln | | | | | |
| | 107 | | 50 | | | | | 55 | | | | | 60 | | | | | | | | | |
| | 108 | | | | | | | | | | | | | | | | | | | | | |
| | 109 | | | | | | | | | | | | | | | | | TAT | GAA | AGG | GAT | GT |
| | 110 | Tyr | Glu | Arg | Asp | Val | Ala | Trp | Ile | Ala | Arg | Gln | Ser | Lys | Arg | Met | Ser | | | | | |
| | 111 | 65 | | _ | _ | | 70 | - | | | - | 75 | | - | _ | | 80 | | | | | |
| | 112 | | | | | | | | | | | | | | | | | | | | | |
| | 113 | | | | | | | | | | | | | | | | | тст | GTC | GAT | GAG | GA |
| | 114 | Ser | Val | Asp | Glu | Asn | Glu | Asp | Δsp | Glu | Asn | Asn | Glu | Asp | Asn | Tyr | Tur | | | | | |
| | 115 | 501 | V U.L | | | 85 | | p | p | | 90 | p | | | шор | 95 | - 7 - | | | | | |
| | 116 | | | | | 05 | | | | | 70 | | | | | ,, | | | | | | • |
| | 117 | | | | | | | | | | | | | | | | | CAC | GAC | CAC | CAC | CA |
| | 118 | 3 ~~ | 3 ~~~ | a 1 | 1 | X = 5 | 1 | 7 ~~ | 7 ~~ | 27. | Dho | M | A ~~ | N ~ ~ | a 1 | 3 ~~ | 3 ~~ | GAC | GAC | GAG | GAC | GA |
| | | ASP | ASP | GTU | - | ASP | ASP | Asp | Asp | | Pne | TAT | ASP | ASP | | Asp | ASP | | | | | |
| | 119 | | | | 100 | | | | | 105 | | | | | 110 | | | | | | | |
| | 120 | | | | | | | | | | | | | | | | | | | | | |
| | 121 | | | | | _ | | _ | _ | | _ | _ | | | | _ | | GAG | GAA | GAA | GAA | TT |
| | 122 | GIu | GLu | | GLu | Leu | GLu | Asn | | Met | Asp | Asp | GLu | | GLu | Asp | GIu | | | | | |
| | 123 | | | 115 | | | | | 120 | | | | | 125 | | | | | | | | |
| | 124 | | | | | | | | | | | | | | | | | | | | | |
| | 125 | | | | | | | | | | | | | | | | | GCC | GAA | GAA | GAG | ΑT |
| | 126 | Ala | Glu | Glu | Glu | Met | Ser | Val | Glu | Met | Gly | Ala | Gly | Ala | Glu | Glu | Met | | | | | |
| | 127 | | 130 | | | | | 135 | | | | | 140 | | | | | | | | | |
| | 128 | | | | | | | | | | | | | | | | | | | | | |
| | 129 | | | | | | | | | | | | | | | | | GGT | GCT | GGC | GCT | AA |
| | 130 | Gly | Ala | Gly | Ala | Asn | Cys | Ala | Cys | Val | Pro | Gly | His | His | Leu | Arg | Lys | | | | | |
| | 131 | 145 | | - | | | 150 | | - | | | 155 | | | | _ | 160 | | | | | |
| | 132 | | | | | | | | | | | | | | | | | | | | | |
| | 133 | | | | | | | | | | | | | | | | | AAT | GAA | GTG | AAG | ТG |
| | 134 | Asn | Glu | Val | Lvs | Cvs | Ara | Met | Tle | Tur | Phe | Phe | His | Asp | Pro | Asn | Phe | | | | | - |
| | 135 | | | | -1- | 165 | 9 | | | - 1 - | 170 | | | | | 175 | | | | | | |
| | 136 | | | | | | | | | | - , 0 | | | | | | | | | | | |
| | 137 | | | | | | | | | | | | | | | | | CTC | GTG | ጥረጥ | א ידי א | CC |
| | 138 | Low | Val | g.~ | т1 ~ | Dro | Wal. | λαν | Dro | T *** | a1 | @1 ~ | Mo+ | a1 | Cuc | λ r~ | Cvc | CIG | 919 | 101 | MIH | CC |
| | | ьeu | val | De L | | F10 | νат | Asn | FIO | - | GIU | OTII | Mer | GIU | _ | MIG | CAR | | | | | |
| | 139 | | | | 180 | | | | | 185 | | | | | 190 | | | | | | | |
| | 140 | | | | | | | | | | | | | | | | | - | | | | |
| | 141 | - | _ | _ = | _ | | | | _ + | | | | - | - | | | | GAA | AAT | GCT | GAT | GA |
| | 142 | Glu | Asn | | Asp | Glu | GLu | Val | | Met | Glu | GLu | | Glu | Glu | GLu | GLu | | | | | |
| | 143 | | | 195 | | | | | 200 | | | | 205 | | | | | | | | | |
| | 144 | | | | | | | | | | | | | | | | | | _ | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

Please adjust format. Align tryslets directly about conespording omend audi.

RAW SEQUENCE LISTING PATENT APPLICATION US/08/819,669A

DATE: 08/08/98 TIME: 14:17:56

| | | • |
|---|-----|---|
| | | INPUT SET: S27952.raw |
| | 145 | GAG GAG GAG GAG GA |
| | 146 | Glu Glu Glu Glu Glu Glu Met Gly Asn Pro Asp Gly Phe Ser Pro |
| | 147 | 210 215 220 225 |
| | 148 | |
| > | 149 | TAG 675 |
| - | 150 | -1.0 |
| | 151 | |
| | 131 | |
| - | 152 | (2) INFORMATION FOR SEQ ID NO: 3: |
| | 153 | |
| | 154 | (i) SEQUENCE CHARACTERISTICS: |
| > | 155 | (A) LENGTH: 228 base pairs |
| | 156 | (B) TYPE: nucleic acid |
| | 157 | (C) STRANDEDNESS: Singular |
| | 158 | (D) TOPOLOGY: linear |
| | 159 | (-, |
| | 160 | (ii) MOLECULE TYPE: genomic DNA |
| | 161 | (, 5 5 |
| | 162 | (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3: ' |
| | 163 | (, |
| | 164 | GCATGCAG |
| | 165 | TTCCCCTT TCCCCTT |
| | 166 | TCATTATG |
| | 167 | ATAGGATTAC AC |
| | 168 | adjust GCATGCAG TTCCCCTT TCATTATG ATAGGATTAC AC |
| | 169 | |
| | | V |
| | 648 | (2) INFORMATION FOR SEQ ID NO: 10: |
| | 649 | |
| | 650 | (i) SEQUENCE CHARACTERISTICS: |
| > | 651 | (A) LENGTH: 662 base pairs 66/ Now |
| | 652 | (B) TYPE: nucleic acid |
| | 653 | (C) STRANDEDNESS: Singular |
| | 654 | (D) TOPOLOGY: linear |
| | 655 | |
| | 656 | (ii) MOLECULE TYPE: genomic DNA |
| | 657 | |
| | 658 | (ix) FEATURE: |
| | 659 | (A) NAME/KEY: MAGE-21 gene |
| | 660 | |
| | 661 | (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10: |
| | 662 | |
| > | 663 | TGATCCCCAT GGATCCAGGA AGAATCCAGT TCCACCCCTG CTGTGAACCC 5079 |
| | 664 | AGGGAAGTCA CGGGGCCGGA TGTGACGCCA CTGACTTGCG CGTTGGAGGT 100 |
| | 665 | CAGAGAACAG CGAGATTCTC GCCCTGAGCA ACGGCCTGAC GTCGGCGGAG 150 |
| | 666 | GGAAGCAGGC GCAGGCTCCG TGAGGAGGCA AGGTAAGATG CCGAGGGAGG 200 |
| | 667 | ACTGAGGCGG GCCTCACCCC AGACAGAGGG CCCCCAATAA TCCAGCGCTG 250 |
| | 668 | CCTCTGCTGC CAGGCCTGGA CCACCCTGCA GGGGAAGACT TCTCAGGCTC 300 |
| | 669 | AGTCGCCACC ACCTCACCCC GCCACCCCC GCCGCTTTAA CCGCAGGGAA 350 |
| | 670 | CTCTGGTGTA AGAGCTTTGT GTGACCAGGG CAGGGCTGGT TAGAAGTGCT 400 |
| | 671 | CAGGGCCCAG ACTCAGCCAG GAATCAAGGT CAGGACCCCA AGAGGGGACT 450 |
| | 672 | GAGGGTAACC CCCCGCACC CCCACCACCA TTCCCATCCC CCAACACCAA 500 |
| | 673 | CCCCACCCC ATCCCCCAAC ACCAAACCCA CCACCATCGC TCAAACATCA 550 |
| | 0,5 | DOUGLOSS ATCCCCOMAC MCCMANCOCM CCMCCMICGC TCMANCMICM 220 |

RAW SEQUENCE LISTING PATENT APPLICATION US/08/819,669A

DATE: 08/08/98 TIME: 14:17:57

INPUT SET: S27952.raw

| | | | | | | mi or ser. s | 2/932.IUW |
|-----|------------|------------|------------|------------|------------|--------------|-----------|
| 674 | ACGGCACCCC | CAAACCCCGA | TTCCCATCCC | CACCCATCCT | GGCAGAATCO | 600 | |
| 675 | GAGCTTTGCC | CCTGCAATCA | ACCCACGGAA | GCTCCGGGAA | TGGCGGCCAA | 650 | |
| 676 | GCACGCGGAT | CC | | | 662 | | |
| 677 | | | | | | | |
| 678 | | | | | | | |

SEQUENCE VERIFICATION REPORT PATENT APPLICATION *US/08/819,669A*

DATE: 08/08/98 TIME: 14:17:57

INPUT SET: S27952.raw

| Line | Error | Original Text |
|------|--|--|
| 62 | Entered (462) and Calc. Seq. Length (0) differ | (A) LENGTH: 462 base pairs |
| 84 | Entered (675) and Calc. Seq. Length (51) differ | (A) LENGTH: 675 base pairs |
| 101 | # of Sequences for line conflicts w/ running total | GAA ATT CTG CCT TAT CTA GGG TGG CTG GTC TT |
| 149 | # of Sequences for line conflicts w/ running total | TAG |
| 155 | Entered (228) and Calc. Seq. Length (0) differ | (A) LENGTH: 228 base pairs |
| 651 | Entered (662) and Calc. Seq. Length (661) differ | (A) LENGTH: 662 base pairs |
| 663 | # of Sequences for line conflicts w/ running total | GÁTCCCCAT GGATCCAGGA AGAATCCAGT TCCACC |